

WHAT IS CLAIMED IS:

1. A thermoplastic composition based on polyamide reinforced with regard to impacts comprising:
- 5 I) from 60 to 99% by weight of the total weight of the composition of at least one polyamide (I),
II) from 1 to 40% by weight of the total weight of the composition of at least one block copolymer (II) corresponding to the following general formula
- 10 $Y-B-Y'$
in which:
- B is an elastomeric block thermodynamically incompatible with the Y and Y' blocks,
 - Y and Y' have or do not have the same chemical
- 15 composition as one another,
at least one of the two blocks Y and Y' being partially or entirely composed of poly(methyl methacrylate),
III) from 0 to 20% by weight of the total weight of the composition of at least one impact additive,
- 20 the total of (II) and (III) not exceeding 50% by weight.
2. The composition as claimed in claim 1, characterized in that it preferably comprises:
- 25 from 70 to 98% by weight of (I)
from 2 to 30% by weight of (II).
3. The composition as claimed in claim 1 or 2, characterized in that B is obtained by the
- 30 polymerization of at least one monomer chosen from butadiene, isoprene, 2,3-dimethyl-1,3-butadiene, 1,3-pentadiene or 2-phenyl-1,3-butadiene.
4. The composition as claimed in claim 3,
- 35 characterized in that B is obtained by the polymerization of butadiene.
5. The composition as claimed in one of the preceding

claims, characterized in that Y and Y' are obtained by the polymerization of at least one monomer chosen from styrene and short-chain alkyl methacrylates, such as methyl methacrylate.

5

6. The composition as claimed in claim 5, characterized in that Y is a block composed predominantly of styrene and in that Y' is a block composed predominantly of methyl methacrylate syndiotactic to a level of greater than 60%.

10

7. The composition as claimed in claim 1, characterized in that the impact additive is chosen from the group consisting of elastomers, such as EPDM or elastomeric polyolefins.

15

8. The composition as claimed in one of the preceding claims, characterized in that the polyamide (I) is at least one polyamide chosen from the group consisting of polyamides-4, -6, -10, -11, -12, -4,6, -6,9, -6,10, -6,12 and -12,12.

20

9. The use in the preparation of polyphase composite materials of a composition as claimed in one of claims 1 to 8 in combination with at least one compound chosen from fibers, such as glass fibers, carbon fibers or other fibers derived from carbon, metal fibers or textile fibers.

25

10. The use in the preparation of polymer alloys of a composition as claimed in one of claims 1 to 8 in combination with at least one compound chosen from polyamides and polyolefins.

30

11. The use in the preparation of objects by techniques for the conversion of thermoplastics, such as injection molding, extrusion, blowing or molding, of a composition as claimed in one of claims 1 to 8.

35

12. A polyphase composite material obtained as claimed in claim 9.

13. A polymer alloy obtained as claimed in claim 10.

5

14. An object as claimed in claim 11.